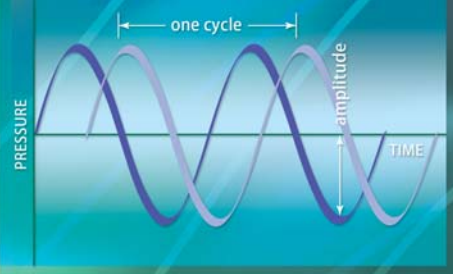
period of sound waves

Frequency and Period



Sound Waves

A sound wave can be thought of as the mode of transportation that carries sound through matter. Sound waves have several properties that collectively create sound. Frequency, wavelength, period, amplitude, and speed of the wave determine what kind of sound is heard. As sound waves move through matter their wavelength and speed change while their frequency remains constant.

Period is the amount of time (in seconds) between two peaks in a sound wave. The frequency of a sound wave is determined by the inverse of the period. Frequency is measured in cycles per second and expressed in hertz (Hz), kilohertz (kHz), or megahertz (mHz). Humans can hear sounds from 20 to 20,000 Hz.

The only sound which consists of a single frequency is the pure sine tone, either produced by a sine wave oscillator, or approximated by a tuning fork. All other sounds are complex, consisting of a number of frequencies of greater or lesser intensity.

Physics: If a sound wave has a frequency of 1,200 hertz and a speed of 360 meters per second, what is its wavelength, in meters?

Answer: 0.3
(Solution: wavelength = speed / f = 360 / 1,200 = 0.3 meters)

december 2007

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			November 2007	January 2008		1 World AIDS Day, Day Without Art, SAT Test Date
2	3	4	5 Chanukah Begins	6	7	8 Bodhi Day (Buddha's Enlightenment), ACT Test Date
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25 Christmas Day	26 Boxing Day, Kwanzaa	27	28	29
30	31					